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## NTE5745 3 Phase Bridge Rectifier Module

**Description:**

The NTE5745 is a powerblock module designed for three-phase full wave rectification and contain six diodes connected in a three-phase bridge configuration. The mounting base of the module is electrically isolated from the semiconductor elements for simple heatsink construction.

**Features:**

- Isolated Mounting Base
- Pressure Contact Technology with Increased Power Cycling Capability
- Space and Weight Savings

**Applications:**

- Inverter
- Inductive Heating
- Chopper

**Electrical Characteristics:** ( $T_J = +150^\circ\text{C}$  unless otherwise specified)

Maximum DC Output Current ( $T_C = +100^\circ\text{C}$ , Three-phase, full wave rectifying circuit), $I_O \dots$	100A
Repetitive Peak Reverse Voltage ( $V_{RSM} = 1800\text{V}$ , $t_p = 10\text{ms}$ ), $V_{RRM} \dots$	1600V
Maximum Repetitive Peak Current ( $V_{RRM} = 1600\text{V}$ ), $I_{RRM} \dots$	8mA
Maximum Surge Forward Current ( $V_R = 0.6V_{RRM}$ , 10ms Half sine wave), $I_{FSM} \dots$	1200A
Maximum $I^2t$ for Fusing ( $V_R = 0.6V_{RRM}$ , 10ms Half sine wave), $I^2t \dots$	$7.2\text{A}^2\text{s} * 10^3$
Maximum Threshold Voltage, $V_{FO} \dots$	0.8V
Maximum Forward Slope Resistance, $r_F \dots$	4.5m $\Omega$
Maximum Peak Forward Voltage ( $J = +25^\circ\text{C}$ , $I_{FM} = 100\text{A}$ ), $V_{FM} \dots$	1.3V
Storage Temperature Range, $T_{stg} \dots$	$-40^\circ$ to $+125^\circ\text{C}$
Isolation Breakdown Voltage (50Hz, RMS, $t = 1\text{min}$ , $I_{ISO} = 1\text{mA max}$ ), $V_{ISO} \dots$	2500V
Thermal Resistance, Junction-to-Case (Single Side Cooled), $R_{thJC} \dots$	0.2 $^\circ\text{C}/\text{W}$
Thermal Resistance, Case-to-Heatsink (Single Side Cooled), $R_{thCH} \dots$	0.07 $^\circ\text{C}/\text{W}$

### Circuit Diagram

